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# DEVELOPMENT OF ICT TRACK CHANGE FEATURE IN DIGITAL EDITING COURSES TO IMPROVE THE COMPETENCE OF PROSPECTIVE TEACHER STUDENTS

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#### Abstract

This study aims to develop an evaluation tool for reading comprehension tests based on TPACK (Technological Pedagogical Content Knowledge) using the Track Change feature. The resulting evaluation tool is expected to be a reference for teachers in assessing reading comprehension skills. The testmoz application is relevant software in the form of a test tool, the application will assist teachers in carrying out direct assessments in providing online assessments to students. The research approach used is a qualitative research approach of the type of development (Research and Development). The data was collected through a literature study, the design of a reading comprehension assessment tool model using testmoz, and the results of testing the use of the product. Data collection techniques in the form of expert validation and product trial results. The research output is in the form of scientific articles to be published in national journals and products in the form of an evaluation tool for reading comprehension tests using the testmoz application, as well as additional outputs of 1 IPR product from research results. TKT measured is the level 2.

Keywords: Evaluation tool, reading comprehension, TPACK, Track Change app

#### Abstrak

Penelitian ini bertujuan mengembangkan alat evaluasi tes membaca pemahaman yang berbasis TPACK (Technological Pedagogical Content Knowledge) menggunakan fitur Track Change. Alat evaluasi yang dihasilkan diharapkan dapat menjadi rujukan bagi para guru dalam menilai keterampilan membaca pemahaman. Aplikasi testmoz merupakan perangkat lunak yang relevan berbentuk alat tes, aplikasi tersebut akan membantu guru dalam melaksanakan penilaian secara langsung dalam memberikan asesmen secara daring kepada peserta didik. Pendekatan penelitian yang digunakan yaitu pendekatan penelitian kualitatif jenis pengembangan (Research and Depelopment). Pengumpulan data dilakukan melalui studi literatur, ancangan model alat penilaian membaca pemahaman menggunakan testmoz, dan hasil uji coba penggunaan produk. Teknik pengumpulan data berupa validasi ekspert dan hasil uji coba produk. Luaran penelitian berupa artikel ilmiah yang akan dipublis pada jurnal nasional dan produk berupa alat evaluasi tes membaca pemahaman menggunakan aplikasi testmoz, serta luaran tambahan 1 produk HKI hasil penelitian. TKT yang diukur adalah TKT 2.

Kata Kunci: Alat evaluasi, membaca pemahaman, TPACK, aplikasi Track Change

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### **INTRODUCTION**

Teachers have to evaluate test results and apply success standards. Evaluation is an identification process to measure and assess whether an activity or program implemented is in accordance with the plan or goals to be achieved. Evaluation plays an important role in determining the level of success of learning in the education unit.

Technological Pedagogical Content Knowledge or is often reffered as TPACK. Furthermore, the term to be used is TPACK. TPACK is the knowledge needed to integrate technology in learning. A teacher is expected have a good TPACK in order to carry out teaching effectively. One of the teacher TPACK levels is the implementation (exploring) stage where the teacher actively mixes learning with appropriate technology/ICT. The rapid development of ICT has ushered in the digital era or the global era.

The Industrial Revolution 4.0 as a new chapter of progress in the distribution of information demands rapid technological development, thus changing the social paradigm of society in various activities. The world of education is one of the areas most affected by the revolution (Ardhana, 2020). One of the impacts of the industrial revolution 4.0 in the field of education is the assessment process that utilizes ICT media. Assessment has a strategic position in efforts to improve the quality of learning and education graduates at each school level. One example of an online-based learning assessment application is testmoz. Testmoz is an application that provides online tests with various features for free or paid.

The other aspect that also matters in terms of developing reading and writing comprehension is editing skills. The term 'editing' means different things to different people, as it is used in various sectors of the industries that can be grouped into the very broad category of 'communication': publishing, journalism, film and recording (visual and audio). Precisely what the editing entails depends on the nature of the end-product of the industry in question. (Boenish 2013 p. 141). In case of writing, Eneste (2017 p. 8) suggests that there are three aspects that become the object of editing, namely systematic presentation, content, and language (regarding spelling, diction, and sentence structure)." The systematic aspect of presentation includes the envelope style, which is the peculiarity of each publishing institution.

Thus, this study tries to develop an evaluation tool specifically for editing comprehension based on TPACK using the testmoz test application. This evaluation tool aims as an alternative that can be used by teachers, especially Indonesian language teachers, in conducting online assessments for learning reading and writing comprehension.

This study aims to develop a test evaluation tool, especially regarding reading comprehension based on TPACK (Technological Pedagogical Content Knowledge) using the testmoz application. The resulting evaluation tool is expected to contribute to the field of Indonesian language learning in the form of a test kit and can be a reference for teachers in assessing reading skills, especially reading and writing comprehension.

#### **METHOD**

The research method used is development research. The design chosen is a 4D model. According to Thiagarajan, Dorothy, and Melvyn (1974) the 4D model is one of the research and development methods used to develop learning tools. As the name implies, the 4D model consists of 4 main stages, namely Define, Design, Develop, and Disseminate.

The research data is planned to be taken from several sources, namely (1) the researcher himself as a reviewer of literature theory; (2) experts (lecturers and teachers) as instrument validators; (3) Students as a source for product trials. This is of course in accordance with the nature of development research and the type of qualitative research method.

The research instrument consisted of a model design for reading comprehension evaluation tools, product feasibility validation rubrics, multiple-choice comprehension tests and descriptions. Multiple choice questions and descriptions are used to measure knowledge about reading comprehension. After that, the questions were tested to see the validity, reliability, discriminatory power, and level of difficulty of the questions. This is in line with Sugiyono (2014, p. 20) that after the construct testing was completed from the experts, the instrument testing was continued on the sample where this population was taken. The research steps are presented in the flow chart as follows.



Figure 1. Research Workflow

## **RESULTS AND DISCUSSION**

## Results

The results of research and development carried out by researchers are an evaluation tool using the testzmos application in editorial class. This research and development uses the Research and Development method. The research and development model goes through several stages, namely: (1) Development of measuring instrument specifications, (2) Writing statements or questions, (3) Reviewing statements and questions, (4) Assembling Instruments, (5) Trial, (6) Selection and assembly of instruments, (7) Administration of instruments, and (8) Preparation of scales and norms. The steps in developing an evaluation tool in the form of an online test are as follows:

Based on the results of the research conducted, it was found that before using the help of the track change application, it was found that one of the main approaches in learning was still

using a very simple pattern, where the learning media still used the help of the Word application system which was intended to provide a visual picture to the students. students to help understand the material presented. However, the application assistance still requires development because it cannot display patterns of change related to digital script editing skills for student teacher candidates.

The use of the track change application provides an opportunity for prospective educators to get feedback in editing or editing courses. So that students can understand the steps needed to support the completion of the given task. This is because editing courses require better accuracy.

With this track change application, it is possible for students to get various opportunities to find and adjust several manuscripts related to the editing process carried out. So that they can develop manuscripts that are much higher quality and have clear meanings for the readers of the texts, both in the form of physical scripts and in the form of online scripts. The use of the track change application can provide opportunities for students to streamline editing process time and minimize editing errors. Here is how the track change application looks.



Gambar 2. Track Change Feature on Microsoft Word

The use of this track change application can develop a much more complete character in understanding word processing and more precise word-sorting strategies. So as to be able to provide opportunities for students to develop other vocabulary or equivalent words that are more productive and in accordance with the required publication standards, both in the form of physical publications and in the form of electronic publications.

#### Discussion

#### 1. Preliminary Study Stage

At the preliminary study stage in developing an evaluation tool using the testmoz application, a series of processes were carried out, namely conducting a needs analysis by distributing questionnaires to students to the class that will be used as a place of research, namely the editing class. The stage of distributing the needs analysis questionnaire is useful for knowing the needs of the school and the availability of supporting infrastructure to conduct research in the editing class and aims to determine the interest of students in learning Indonesian language editing and the interest of students in the application to be developed. The data obtained from the distribution of questionnaires obtained that students really like learning while playing especially

using online tests in the form of games, but the school has not made maximum use of infrastructure facilities to support learning activities, especially Indonesian language courses. So, it can be concluded that this class really needs something new in learning by introducing the testmoz application which can help the process of evaluating Indonesian language editing learning.

## 2. Instrument Assembly Stage

The first instrument assembly stage is to prepare materials such as the syllabus and questions that will be included in the evaluation tool using the testmoz application. Next, adjust the questions that will be entered into the application according to the format and availability of each test category in this testmoz application. The questions are adjusted to the prototype curriculum syllabus used in the Indonesian Language Education Study Program, IKIP Siliwangi. Next, namely the development stage, at this development stage it determines how many test categories will be used. In the testmoz application there are 4 categories of tests, namely quizzes, surveys, jumbles, and discussions. In developing an evaluation tool using the testmoz application, the researcher uses the four categories of tests that are in the application. After the next development stage, the product design stage is to make questions using the four test categories in the application by dividing into 2 parts according to the advice of the material expert validator so that it does not take time when tested. The four categories consist of 15 questions in the quiz category, 5 questions in the survey category, 5 questions in the jumble category, and 3 questions in the discussion category. So the number of questions in each evaluation section is 28 questions. Furthermore, website design is by registering via email. This testmoz application is available for free and can be played using a computer or android phone. The initial design on the test display is by filling in the test identity after completing the test identity then starting to enter the questions into the test category in the application. Questions that have been created can be saved and published. The results of product development are in the form of an evaluation tool using the testmoz application in editing lessons.

## 3. The Trial Stage

The trial stage was carried out after the instrument assembly stage. The product, which has been validated by several validators, material experts, media experts, and linguists, then receives suggestions for improvement, which is then revised and gets a proper predicate without revision, then the product is tested on students. There are some students who do not work seriously so that the value obtained does not reach the standard. This happens because of a lack of motivation to students that it is important to be serious in doing everything small and big. The first trial was carried out by 10 class participants, when students finished completing the test then student assessment questionnaires were distributed to assess the product being tested. The results obtained from the distribution of student assessment questionnaires in the first trial were 77% with the "interesting" criteria. The second trial was carried out by 30 students and the provision of student assessment questionnaires when the product was tested. The results obtained from the distribution of the questionnaire were 81% with the "very interesting" criteria. Judging from the initial percentage and the final percentage, there was an increase in student assessments of 4%. This increase occurred because from the evaluation trial 1 there were still many students who were not serious in taking the test which was attended by 10 students, while in the evaluation trial 2 the researchers explained that students were serious about taking the test and it was seen that they had fun doing the test. attended by 30 students. After being tested and getting the results of what the students did, the validity will then be calculated. It was found that from 28 questions in evaluation 1, there were 6 questions that were invalid, so the question could not be used. In evaluation 2, there were 4 invalid questions from the 28 questions tested so that the invalid questions were not used.

#### 4. Selection and Assembly stage

This selection and assembly stage is carried out after the product has been validated and tested. Products are validated by material experts, media experts and linguists. The validation questionnaire assessment instrument uses a Likert scale with a score of 5-1 from very good to very poor. The product was tested on students of the Indonesian Language Education Study Program, IKIP Siliwangi.

## CONCLUSION

The use of technology in the teaching and learning process can indeed help improve student achievement in a subject especially the subject of language. The results of this study as well supporting the studies conducted by Azar and Nasiri, (2014); Bicer and Ramazan, (2007); Gündüz, (2005); Houcine, (2011); Jarvis and Achilleos, (2013); Rahimi and Miri, (2014). Thus, researchers argue the integration of TPACK in the process teaching and learning should be enriched with teaching computer -assisted language so that students can benefit from existing technology. In addition, teachers must be wise manipulating the technological facilities that exist around them to improve the teaching and learning process. Based on research conducted on 5th semester students of Indonesian Language Education of IKIP Siliwangi, it can be concluded that the use of Google Classroom integrated Testmoz for one semester has a very high acceptance rate of 93.30%. This high acceptance rate can be seen from the individual's digital literacy, use value, and the concept of editorial. The use of Google Classroom integrated Testmoz in the teaching and learning process can facilitate teaching management from the teacher's point of view and student participation in learning. The use of Google-classroom integrated Testmoz also gets a very high acceptance rate and positive perception by students in rural areas based on the results of interviews conducted. Students who live in rural areas have a very high interest in using online-based learning applications. The results of the audiovisual recording data also showed a high level of interest during introduction activities, tutorials, and testing using Testmoz.

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